DR. THOMAS A. CWIK

PROFESSIONAL EXPERIENCE

9/97 - present JET PROPULSION LABORATORY
Pasadena, CA 91109

Principal Member of the Laboratory

10/96 - present JET PROPULSION LABORATORY
Pasadena, CA 91109

Technical Group Supervisor, High Performance Computing Group; Supervisor of 12-member group focusing on use of high-performance computing for NASA/JPL science and engineering applications; developing and using integrated design tools for instrument development at proposal and build stages; invention and analysis of microdevice components for coupling and filtering in remote sensing instruments; algorithm development for high performance computing applications

6/96 - present University of Washington, Department of Electrical Engineering
Seattle, WA 98195

Affiliate Professor; supervises Ph.D. student

5/88 – 10/96 JET PROPULSION LABORATORY
Pasadena, CA 91109

Member Technical Staff, Microwave Engineering Group; Research in parallel computational electromagnetics task (Air Force Funded); developed microwave components for the deep space network; beam-waveguide antenna design and analysis

9/86 – 1/88 ELECTRONICS RESEARCH LABORATORY
Norwegian Institute of Technology, N-7034 Trondheim NTH, NORWAY

Postdoctoral Fellow; developed analysis of shaped reflector antenna patterns at and near caustic field locations

8/82 – 8/86 ELECTROMAGNETIC COMMUNICATION LABORATORY
University of Illinois, Urbana, IL 61801

Research Assistant; Ph.D. work in frequency selective surfaces–analysis, design, and test; wrote widely used frequency selective surface design code

9/81 – 8/82 JOINT INSTITUTE FOR LABORATORY ASTROPHYSICS
National Bureau of Standards, Boulder, CO 80303

Research Assistant; member of team building three-wavelength geodimeter for precise distance measurement (digital phase measurement)

6/81 – 9/81 VERY LARGE ARRAY
National Radio Astronomy Observatory, Soccoro, NM 87801

Summer Assistant; designed, built and tested 327MHz Clavin feedhorn for 25m array antennas

8/80 – 6/81 ELECTROMAGNETICS LABORATORY
University of Illinois, Urbana, IL 61801

Aileen Andrew Research Assistant; built and tested hybrid slot-monopole patch antenna; tested waveguide couplers and feedhorns

EDUCATION

UNIVERSITY OF ILLINOIS, URBANA, IL

Ph.D. in Electrical Engineering, June 1986
Thesis: *Scattering From General Periodic Screens*
Research Advisor: Professor Raj Mittra

M.S. in Electrical Engineering, August 1981
Thesis: *The Hybrid Slot Antenna*
Research Advisor: Professor Paul Mayes

B.S. in Electrical Engineering, May 1979

HONORS and AWARDS

- JPL Technology and Applications Programs Exceptional Achievement Award *"In Recognition Of Exceptional Achievement And Technical Leadership In The Development Of Massively Parallel Computer Codes For Electromagnetic Design And Analysis,"* 1994
- IEEE Senior Member Election, 1994
- IEEE Gordon Bell Award Finalist for "*Superior Effort in Practical Parallel Processing Research," 1992*
- Norwegian Marshall Fund Scholar at the Electronics Research Laboratory, Norwegian Institute of Technology, Trondheim, NORWAY, 1987
- Aileen Andrew Fellowship at the University of Illinois, Urbana-Champaign, 1979